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hydrophobic residue selected from the group consisting of valine, phenylalanine, leucine and isoleucine, Xaa4 is a polar residue selected from the group consisting of threonine, asparagines, lysine and serine, and Xaa5 is a hydrophobic residue selected from the group consisting of tryptophan, phenylalanine and alanine, an amino acid sequence of Tyr-Xaa5-Asp-Asp SEQ ID: 50, where Xaa5 is alanine or cysteine, amino acid sequence of Xaa6-Val-Thr-Gly SEQ ID 52, where Xaa6 is a polar residue selected from the group consisting of arginine, lysine, glutamic acid, glutamine and valine.

REMARKS

The present invention relates to bacterial Reverse Transcriptase (RT) enzymes which are capable of synthesizing a hybrid RNA-DNA molecule, called msDNA together with the genes which synthesize the DNA and RNA portion of molecule. The invention also relates to the isolation and purification of RTs from bacterium which is capable of synthesizing msDNA.

Rejection Under 35 U.S.C §. 112, First Paragraph

The Examiner has rejected Claim 17 under 35 U.S.C. § 112, First Paragraph because the recited sequence of amino acids making up the claimed Reverse Transcriptase was deemed to contain new matter. Applicants appreciate the Examiner's notice of the error in the recitation. By the foregoing clarifying amendment, Applicants have amended the claim to recite the sequence of amino acid disclosed in SEQ ID: 32. Thus, Claim 17 is enabled by the original disclosure and does not contain new matter.